

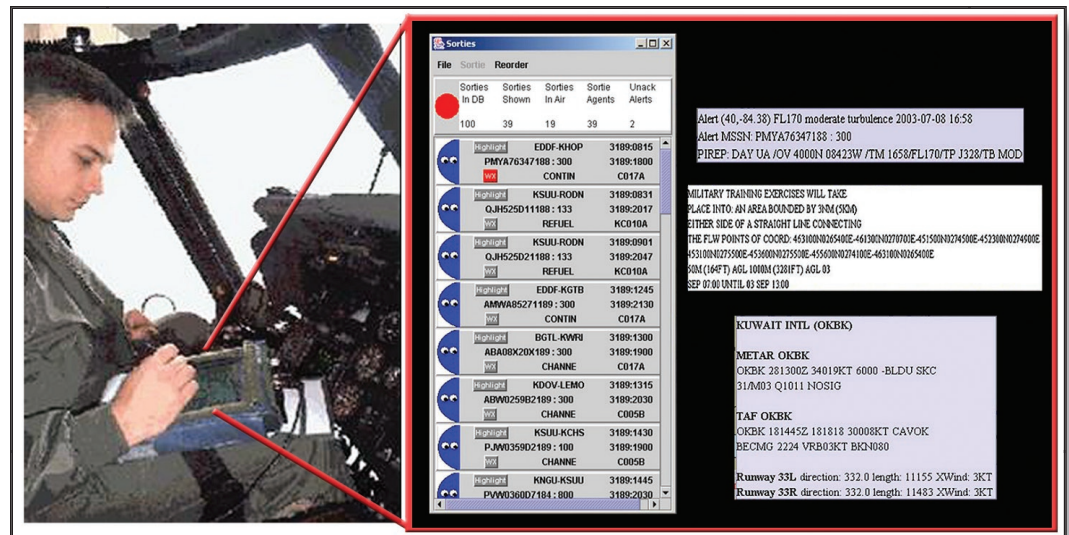


Air Force Research Laboratory | AFRL

Science and Technology for Tomorrow's Air and Space Force

Success Story

DELIVERY OF REAL-TIME WEATHER MANAGEMENT INFORMATION DEMONSTRATED TO AIRCREWS



The Human Effectiveness Directorate and the Air Mobility Battlelab demonstrated the ability to proactively identify real-time problems due to changing weather conditions and to provide that information directly to in-flight aircrews. The directorate developed software called the Work-Centered Support System for Global Weather Management (WCSS-GWM), which was loaded onto an electronic kneeboard and used for the demonstration. The demonstration was provided to various Electronic Systems Center and Air Mobility Command (AMC) senior leaders.



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Accomplishment

The WCSS-GWM was developed under the Global Air Mobility Advanced Technologies program. The system was customized for an electronic kneeboard to demonstrate critically needed real-time weather management capabilities for in-flight aircrews.

Background

The WCSS-GWM software already provided AMC's ground-based command and control (C2) operators the ability to anticipate and resolve potential impacts on missions due to changing weather conditions. The electronic kneeboard was developed under the Air Mobility Battle Lab's Real-Time Information in the Cockpit initiative. An electronic kneeboard is a tablet-based computer that is envisioned to replace the paper-based kneeboard currently used by military pilots.

The demonstration used the WCSS-GWM software, electronic kneeboard hardware, and a simulated ground-to-air link, which reflect the typical communications link between ground-based C2 nodes and AMC aircraft. The demonstration illustrated how this combination could be used to proactively identify and simultaneously alert AMC's C2 personnel and aircrews of "pop-up" weather hazards. Additionally, airfield weather conditions and forecasts, as well as relevant Notices to Airmen information, enabled by the AFRL/IF Integrated Flight Management ATD, were sent to the electronic kneeboard to enable C2 operators and aircrews to rapidly identify problems and jointly carry out necessary re-planning actions.

Human Effectiveness
Support to the Warfighter

Additional information

To receive more information about this or other activities in the Air Force Research Laboratory, contact TECH CONNECT, AFRL/XPTC, (800) 203-6451 and you will be directed to the appropriate laboratory expert. (03-HE-31)